

MEDICAL SURVEILLANCE

Rocky Flats
Environmental Technology Site

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

History of beryllium sensitization and disease 1984 - present

Workers contacted - 18,841

Tested - 6,614

Chronic Beryllium Disease - 81

Sensitized - no disease - 163



EXPOSURE DETERMINES MEDICAL MONITORING NEEDS

- High level
- Low level
- No exposure



WHAT IS HIGH LEVEL?

• 2.0 ug/m³ - Standard

• 0.5 ug/m³ - Rocky Flats

• 0.2 ug/m³ - EPA LOAEL (HEC) *

* Lowest Observable Adverse Effect Level (Human Equivalent Concentration)



WHAT MAY INFLUENCE?

- Air Monitoring
- Personal Protective Equipment
- Industrial Hygiene Oversight
- Prevalence of Sensitivity & Disease



WHAT IS LOW LEVEL?

• 0.01 ug/m^3

General Public

• 0.02 ug/m^3

EPA RfC *

* Inhalation Reference Concentration



MEDICAL EXAM FOR BERYLLIUM WORKER (HIGH LEVEL POTENTIAL)

- History Respiratory Emphasis
- Examination Respiratory & Skin Emphasis
- Pulmonary Functions
- Chest X-ray
- Lymphocyte Proliferation Test
- Cautions



MEDICAL EXAM FOR BERYLLIUM WORKER (HIGH LEVEL POTENTIAL)

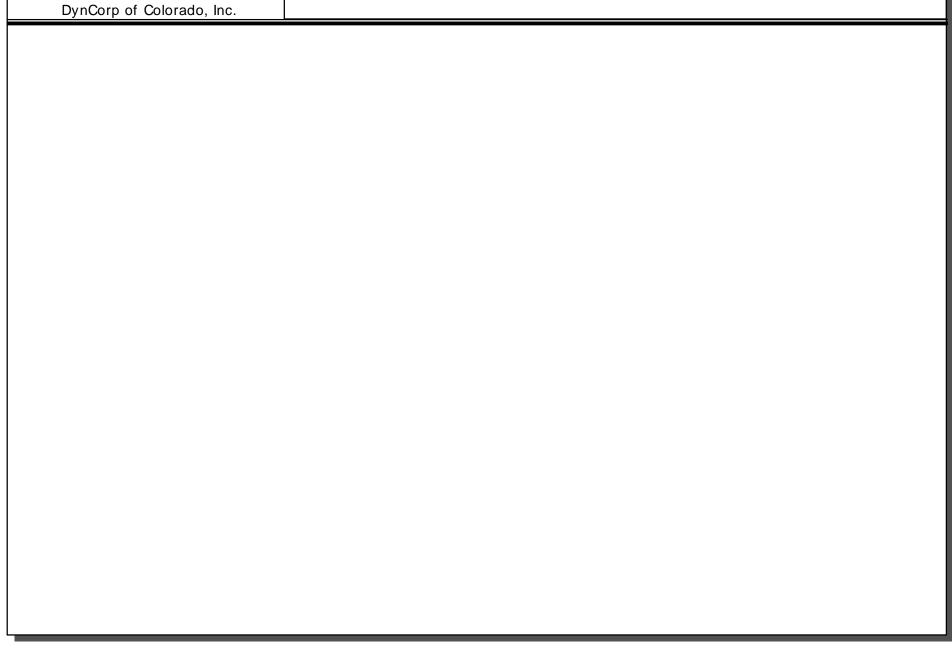
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CHEST X-RAY

- Frequency Annual vs. Other
- ILO "B" Reader
- Quality







LYMPHOCYTE PROLIFERATION TEST

- Double Positive
- Quality
- Frequency



DISQUALIFICATION

- Lung Conditions
- Cardiovascular Conditions
- Skin Conditions
- Conditions that make Diagnosis of CBD Difficult



DISQUALIFICATION

 "any detected medical conditions that would place the employee at an increased risk of material health impairment from exposure to ---"



FOR LOW LEVEL EXPOSURE MEDICAL EXAM

- With or without symptoms?
- History
- Chest X-ray
- Lymphocyte Proliferation Test
- Frequency



WHAT IS NEXT FOR PATIENTS WITH POSITIVE RESULTS?

- Clinical Work-up
- Pulmonologist with Knowledge of Beryllium Disease
- Lung Lymphocyte Test
- Lung Biopsy



WHAT ABOUT EQUIVOCAL RESULTS?

- Non-symptomatic retest in one year
- Symptomatic clinical workup for highly exposed